MAY 02 1988

Mr. Neil Geitner
CH2M Hill
Box 22508
Denver, Colorado 80222

Dear Mr. Geitner:

Enclosed are the U.S. Environmental Protection Agency's (EPA) comments on the draft work plan for the Baxter Springs subsite remedial investigation. The comments should be incorporated into the final report, and a final work plan submitted to EPA as soon as possible. CH2M Hill should explain how each comment was responded to. Its explanation should be handwritten in the column provided on the comment pages.

One copy of the revised plan and explanation of responses should be sent to me as soon as possible. Following review and approval of the revision, CH2M Hill should submit eight bound copies and one unbound copy of the work plan.

Sincerely yours,

Alice C. Fuerst
Remedial Section
Superfund Branch
Waste Management Division

Enclosure

cc: Howard Andrews, B&V (w/enclosure)
bcc: Administrative Record (3 copies) (w/enclosure)
WSTM:SPFD:REMD:Fuerst:du FUE2-8 4/22/88

REMD	REMD	SPFD
Fuerst	Wright	Morby
	WRIGHT 5-2-88	5/2/88

EPA Comments on Draft Work Plan
on Baxter Springs Remedial Investigation
December 2, 1987

General Comments | CH2M Hill Response

1. The purpose of the remedial investigation is to gather enough information about the subsite in order to conduct a feasibility study and for EPA to select a remedial action plan. Therefore, the work plan should identify preliminary remedial action alternatives for the site so that the appropriate data are collected to evaluate alternatives. Through the activities already conducted on the site and subsite, the potential problems have been identified in the preliminary risk assessment as:

- High metals in the surface water - aquatic life problems and drinking water problem
- High metals in shallow ground water, but essentially the shallow ground water is not used as a drinking water source - environmental problem
- Potential leakage of contaminated water to the Roubidoux - public health problem
- Air route exposure to chat pile workers and recreational use of piles - public health problem

The contractor should add other potential problems to the list as appropriate for the subsite. The contractor should develop and evaluate preliminary remedial action alternatives to

correct the identified potential. problems and meet the potential subsite goals (subsite potential goals are attached). This list of potential alternatives should be included as part of the work plan. The contractor should use the the information in the two OUFSs for the Galena subsite in order to develop potential remedial alternatives and not "reinvent the wheel" on listing potential alternatives.

2. The work plan should be developed so that all the necessary information is gathered during the RI and that only data necessary for evaluation of alternatives are gathered. If treatability studies will be necessary, based on the available information, they should be included in the RI work plan.

3. Preliminary identification of potential ARARs and TBCs requirements should be included in the work plan. This list should be used to assist in identifying remedial alternatives The contractor should begin with the list developed in the two OUFSs for the Galena subsite. During the implementation of the RI, the list should be further refined and, therefore, should be a task in the work plan.

4. A ground water/surface water model was developed for the Galena OUFS to evaluate alternatives. That model should be modified, as necessary, in order to use it in the Baxter Springs subsite. All data collected during the RI should be collected for use in evaluating alternatives, therefore, the data gathered should be such that it can be used in the model. All

aspects of the draft RI work plan should be reviewed to be sure the appropriate data needed for use in the model and alternatives evaluation is gathered.

5. The Galena subsite activities appeared to the PRPs to be haphazard. That will not happen on the Baxter Springs RI. All the work will be well planned and well thought out. All activities that will be needed in the subsite must be included in the work plan.

Specific Comments

1. Page 1-8, Remedial Investigation objectives - a) Since we have already determined that the shallow ground water has limited use, an objective of the investigation is not to investigate the extent of the ground water contamination in the shallow aquifer. As shown in the Galena subsite, it will be difficult to define the potential impacts to the deep aquifer, therefore, we should assume based on past work in Oklahoma that there are potential impacts on the deep aquifer. These two objectives listed in the fourth bullet should be removed. b) Since this investigation should gather all necessary data for the FS, the eighth bullet also should be removed.

2. Page 1-9, last sentence a) An explanation is needed on why samples will be analyzed for organics. b) Radiological contamination is mentioned, but the section does not state why. Either explain why radiological contamination is mentioned or remove reference to it.

3. Page 2-1, Parameters of Interest - Some samples will be analyzed for organics. That should be included.

4. Page 2-3, Table 2 - a) Since cyanide is not in the RAS parameters and is not a problem contaminant at the site, it should be removed from the list of parameters for analysis. b) The detection limit for nickel for both ground water and surface water should be 10 ug/l because the CWA criteria for human health is 15.4 ug/l. c) The text should acknowledge that the detection limit for mercury and silver are those used by CLP and above the AWQC criteria. d) The text should explain why the samples will be analyzed for both total and dissolved metals.

5. Page 3-3, last sentence Potential impacts on terrestrial plants are mentioned in the preliminary risk assessment, but are not addressed in the work plan. There should be an explanation why any potential risks are not being addressed.

6. Page 4-1, paragraph 3 - The total project management budget is now not for the first three months in 1988. Please revise this statement.

7. Page 4-9, Mine Waste Characterization - We need to be as practical as possible on characterizing the mine waste. We first need to identify why the wastes should be characterized, what purpose will the characterization have? Purposes include that we need to know if they present a human health hazard through direct contact, inhalation, ingestion or by

runoff from the piles. Assuming they do present a human health hazard, we need information to evaluate what can be done to reduce that health hazard. The Galena OUFS showed that treatment of the wastes through milling and flotation was an option. If that is an option in Baxter Springs, what information is needed to evaluate the option. In Galena, the wastes were subjected to several leach tests and to bench scale treatability studies. If the conditions in Baxter Springs and Galena are similar, then similar testing would be appropriate. CH2M Hill should advise EPA on this. If leach tests and treatability studies are appropriate, they should be included in the work plan. May be it should be done in steps so that the leach tests are done and then, if appropriate, the treatability will be done. All steps should be included in the work plan. This analytical work should be explained in Section 2, "Data Quality Objectives."

The Galena subsite also included field XRF and laboratory XRF. The Baxter Springs subsite field XRF, in conjunction with the remote sensing in both subsites and analytical XRF in the Galena subsite should be used to help characterize the mine wastes and select locations for samples for the leach tests and treatability studies. Are laboratory XRF analyses needed in Baxter Springs? Do not include them unless necessary.

The mine waste characterization work should be staged so that the information is gathered in an organized, efficient method. Each type of analysis should have a useful

purpose for evaluation of public health hazards and/or evaluation of remedial alternatives.

As stated previously, the Galena subsite work appeared to be haphazard to the PRPs. The mine waste characterization should be considered very throughly to be sure that does not happen again.

8. Page 4-10, paragrah 2 - The PRPs believe the term mine waste is too broad because it could include materials that are very different, both physically and chemically. They believe the surface mine wastes category should be subdivided into residual milling wastes and development rock. Please consider this and use as appropriate and practical.

9. Page 4-12, Ground Water Monitoring - During the site-wide water supply inventory and the reconnassiance in Baxter Springs, two or three shallow ground water wells and several mine water discharges were identified. CH2M Hill needs to review the geology of the subsite to be sure the problems identified are from the Boone and not the Pennsylvania. Since the Baxter Springs subsite has the Pennsylvania overlying the Boone, could the shallow wells actually not be in the aquifer of concern? Are the discharges from the mines or are they natural discharges from the Pennsylvania shales? If the problem is actually in the Pennsylvania, is it a natural problem or a problem caused by the mining? These concerns should be evaluated before completing the work plan. We need to be sure we are investigating the correct problem.

Assuming the overall intent of the ground water monitoring is correct, there are still several changes needed in the plan. The plan should be revised to reflect discussions we have had. Activities to determine the potential for the shallow ground water to migrate to the deep aquifer should be removed. Any investigations would not be conclusive, therefore are unnecessary. We assume there is a potential for the migration.

The whole ground water monitoring plan should be reviewed to be sure it will provide the information necessary for the ground water/surface water model to evaluate remedial alternatives.

10. Page 4-13, paragraph 2 - Since the ground water levels will be measured for determining the ground water flow direction rather than for potential for downward movement, the use of the continuous recorders and locations for use should be reevaluated to determine if they are needed. If they are, CH2M Hill should determine the best location to place them. In Galena, we found that the ground water flow direction was near impossible to determine, therefore, are we wasting our money to install and monitor the continuous recorders? Be very sure we will get valuable information if they are installed.

11. Page 4-14, paragraph 1 - Two of the wells to be sampled for water quality should be the two wells in use located during the previous activities.

12. Page 4-14, Surface Water Investigations - The surface water plan should be reviewed to be sure the information collected will be valuable for evaluation of the site problem and for use in the ground water/surface water model for the evaluation of remedial alternatives. Consideration should be given to increasing the number of weirs and continuous recorders (but not purchase more) used on streams. With the current plan, will we know what is coming into the subsite and leaving the subsite from the lead and zinc mining area? Additional locations should only be used if beneficial and necessary for the project. The schedule for sampling will need to be revised. Schedule the field work to get the needed low flow and high flow data.

13. Page 4-17, paragraph 1 - What is the biological data referred to in the first sentence? Biological samples will not be collected, although information should be available through the literature.

14. Page 4-17, Community Relations - If the task to revise the community relations plan has not been included in another work plan, it should be included in this task. The plan should cover the whole site. The first two activities listed on page 4-18 for community relations should be removed. The other activities "may" be conducted, not "will" be conducted.

15. Page 4-18, RI Report - Thirty bound copies and one unbound copy of the final report should be submitted. This addition should be made.